IBM Tealeaf CX RealiTea Viewer
Version 9 Release 0
June 12, 2014

Client-Side Capture Manual

Note
Before using this information and the product it supports, read the information in "Notices" on page 19.

This edition applies to version 9, release 0, modification 0 of IBM Tealeaf CX RealiTea Viewer and to all subsequent releases and modifications until otherwise indicated in new editions.

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Client-Side Capture Manual

Tealeaf provides Client-Side Capture to enable the capture of web sessions to the local computer for situations in which the web application is not currently monitored by Tealeaf. Using CSC, you can capture your web experience and save it to a `.tla` file on your local computer for immediate replay in RTV. Client-Side Capture is useful in the following situations, among others:

- Reviewing proof-of-concepts
- Replay rule development
- Monitoring the impact on replay of development changes to the web application
- General demonstration of replay capabilities

Note: Client-Side Capture requires the download and installation of the appropriate plug-in. These plug-ins are available to customers upon request. For more information, contact Tealeaf Customer Support .

Note: Replay of sessions that are captured by Client-Side Capture requires the installation of the IBM Tealeaf CX RealiTea Viewer stand-alone application on your desktop system. See "RealiTea Viewer (RTV) User Manual" in the *IBM Tealeaf RealiTea Viewer User Manual*.

Note: If you are capturing user interface events through Client-Side Capture, extra JavaScript must be downloaded and installed.

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Chapter 1. Using Client-Side Capture for Fiddler

Tealeaf provides a plug-in for Fiddler that you can use to perform a client-side capture of all HTTP traffic passing through Fiddler to your local hard disk drive. This tool is useful for debugging capture issues while enabling access to Fiddler.

- Fiddler is a debugger that logs all HTTP traffic between your computer and the Internet. See "Acquire Fiddler."

Note: This plug-in is provided as-is by Tealeaf and any express or implied warranties, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose and non-infringement are disclaimed. In no event shall Tealeaf be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of this software, even if advised of the possibility of such damage.

Note: This plug-in should be used instead of the Tealeaf Client Side Capture browser tool, which is no longer supported.

If you are attempting to capture a session that is sourced from a mobile device, more configuration is required. See Chapter 2, "Using Client-Side Capture for Fiddler with mobile devices," on page 15.

Acquire Fiddler

Fiddler allows you to inspect all HTTP traffic, define breakpoints, and manipulate data. For more information about Fiddler, including access to downloads, visit http://www.fiddler2.com/fiddler2.

Note: If you installed a stable version of Fiddler that works with the Client-Side Capture plug-in, Tealeaf strongly recommends disabling automatic updates in Fiddler.

- If you installed the latest version of Fiddler and are encountering issues with the Client-Side Capture plug-in, contact Tealeaf Customer Support .

Acquiring latest versions

1. **JavaScript:** A JavaScript must be installed locally to capture UI events through the Client-Side Capture plug-in. To download the latest version of the CSC JavaScript, go to IBM Passport Advantage.
2. **Plug-in:** The Client-Side Capture plug-in for Fiddler is available through IBM Passport Advantage.

   Note: This plug-in is rarely needed in customer deployments. It is used only if content, such as other Tealeaf JavaScript, must be injected into the captured session data. In such cases, this plug-in should be installed under Tealeaf guidance.

   - In most cases, Tealeaf recommends saving captured sessions using Fiddler's `SAZ` format and submitting to Tealeaf for review.

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Installing and configuring the Fiddler plug-in

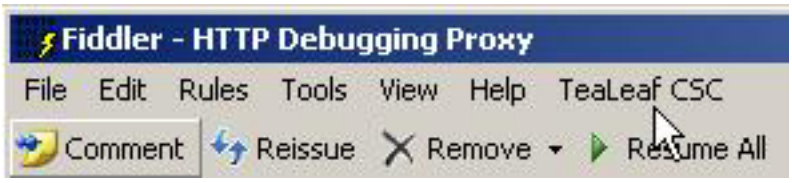
Installing or upgrading

To install or upgrade the Fiddler plug-in:

1. Extract the `.zip` file that contains the plug-in (`FiddlerCSC.dll`).
2. Copy the `.dll` to the `Scripts` directory inside the Fiddler installation directory. Typically, this directory is the following:

   ```
   C:\Program Files\Fiddler2\Scripts
   ```

3. Launch Fiddler. **TeaLeaf CSC** should appear on the menu bar.



Configure Fiddler

To configure Fiddler:

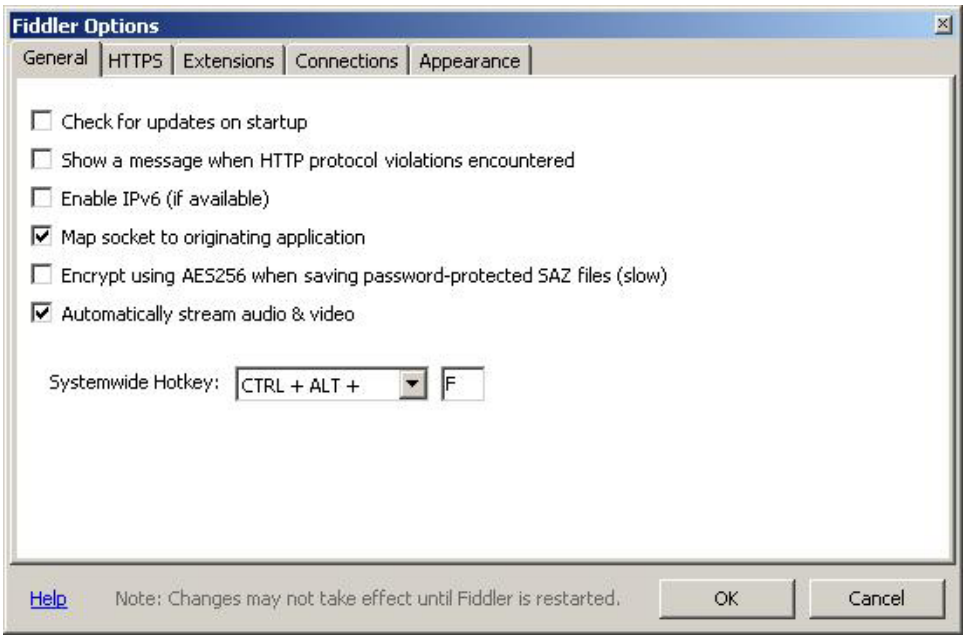
1. Click the status bar. Verify that the capture mode is set to Web Browsers.

2. In the menu, select **File** > **Capture Traffic**.

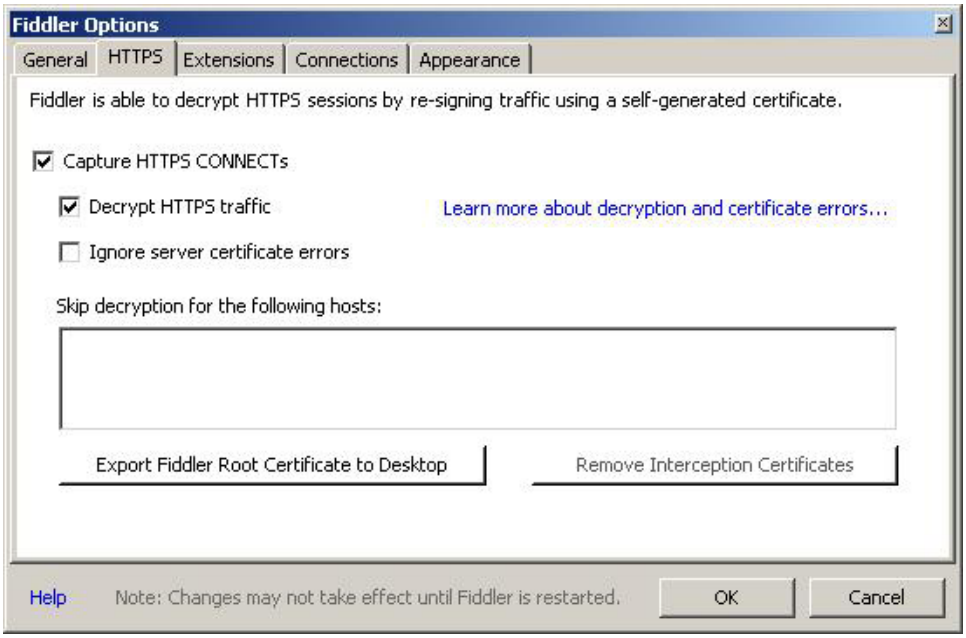
3. In the menu, select **Rules** > **Hide HTTPS Connects** if it is not already selected.

4. In the menu, select **Tools** > **Fiddler Options...**.

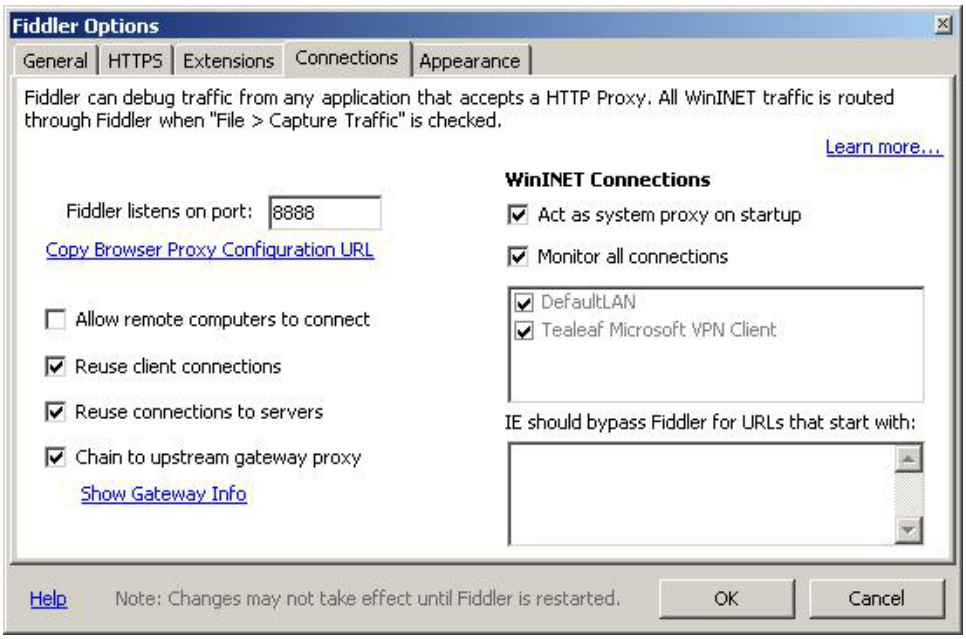
5. On the **General** tab, select the following options:



6. On the **HTTPS** tab, select the following options:



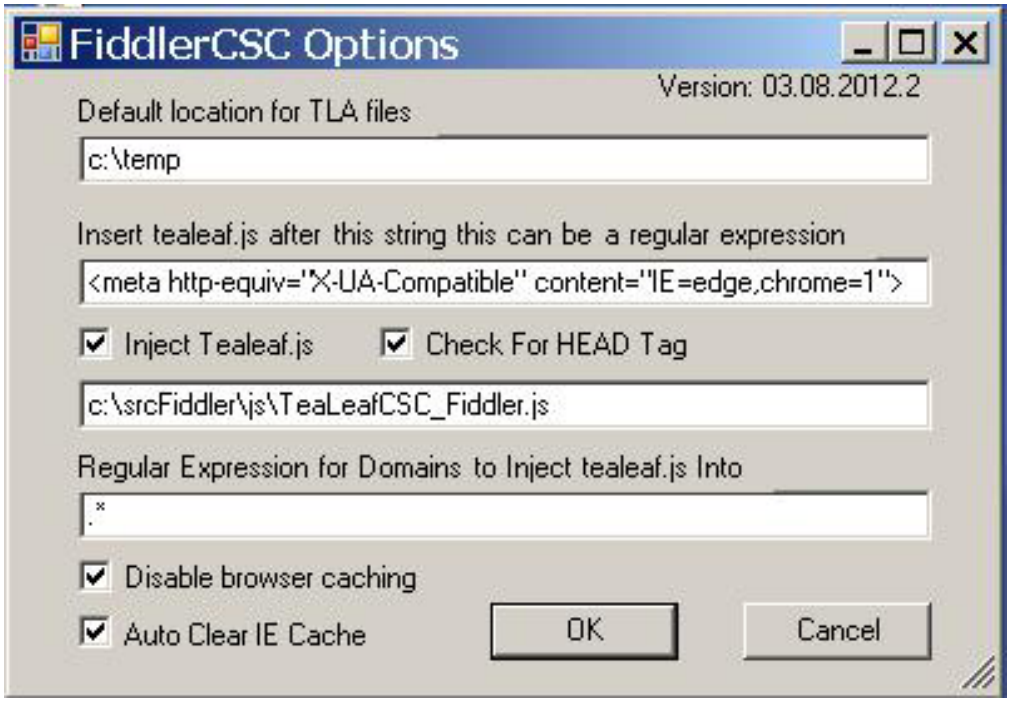
7. On the **Connections** tab, select the following options:


Fiddler Options
General
HTTPS
Extensions
Connections
Appearance
Fiddler can debug traffic from any application that accepts a HTTP Proxy. All WinINET traffic is routed through Fiddler when "File > Capture Traffic" is checked.
Learn more...
WinINET Connections
Fiddler listens on port: 8888
Act as system proxy on startup
Copy Browser Proxy Configuration URL
Monitor all connections
DefaultLAN
Tealeaf Microsoft VPN Client
Allow remote computers to connect
Reuse client connections
Reuse connections to servers
IE should bypass Fiddler for URLs that start with:
Chain to upstream gateway proxy
Show Gateway Info
Help
Note: Changes may not take effect until Fiddler is restarted.
OK
Cancel

8. Click **OK**.

Configure Client-Side Capture

In the **TeaLeaf CSC** menu, select **Options...**.



Steps:

Setting Description

`Default location for TLA files`

Enter the directory location for `.tla` files.

Note: Verify that this directory exists. Otherwise, `.tla` files cannot be saved.

Insert tealeaf.js after this string
If Inject Tealeaf.js is enabled, you can specify the string in the response after which to insert the Tealeaf.js.

- You may enter a regular expression to specify this location.
- If this value is not specified, the Tealeaf.js can be injected in the request that is only based on the settings below.

Inject Tealeaf.js
Select this option if you are injecting the Tealeaf.js JavaScript in the request or response.

Check for HEAD Tag
To configure the plug-in to check for the presence of a HEAD tag in the page before injecting the tealeaf.js JavaScript, select the Check for HEAD Tag check box.

- When enabled, this option prevents the plug-in from injected the tealeaf.js into pages that cannot properly contain it.

Textbox below Inject Tealeaf.js
Enter the full path and name of the Tealeaf Fiddler JavaScript file.

Note: This file can be installed in any directory on your local system. You should not, however, install it within Fiddler directory.

Regular Expression for Domains
Optionally, you can apply a regular expression for matching the domains into which to inject the tealeaf.js file in your Fiddler browsing session.

- The default value (.*) injects tealeaf.js into all domains monitored by Fiddler.
- If this option is empty, tealeaf.js injection is disabled.
- For more information about regular expressions, see "Regular Expressions in the RealiTea Viewer" in the *IBM Tealeaf RealiTea Viewer User Manual*.

Disable browser caching
Select the Disable browser caching option. This option forces an update of page data that is otherwise cached by the browser.

Note: Except in rare cases, this value should be set to true. If this option is set to false, you may receive status code 304 on requests for images, JavaScript, CSS, and other static files, and the content is not captured.

Auto Clear IE Cache
To automatically clear the IE browse cache when Fiddler starts up, click **Auto Clear IE Cache**.

- When this option is selected, the browser cache is cleared when the Tealeaf.js is injected, too.
- This option is useful for forcing a new session to retrieve all objects and eliminates the creation of unnecessary .saz files.

To save your changes, click **OK**.

Note: To apply some of these changes, you must restart Fiddler.

Verifying mousedown event tracking was enabled through CSC

At the time of initial site checks, click events may not be permitted to bubble up for capture by Client-Side Capture. As part of site analysis, it is useful to know if click events are missing.

You can circumvent the issue by enabling the track of the `mousedown` events, which are not typically blocked from bubbling up for capture. To enable capture of the `mousedown` event, complete the following configuration.

Note: Depending on the version of the Fiddler CSC JavaScript that you deployed, this configuration may already be applied. Verify the configuration using the steps below.

1. Locate the Tealeaf configuration file for Fiddler. It may be in the following location: install directory.

   ```
   C:\Program Files\Fiddler2JS\TeaLeafCSC_Fiddler.js
   ```

2. Edit the file.
3. Locate the following entry:

   ```
   {"domevent": "mousedown",
    "load": false,
    "tlhandler": "TeaLeaf.Client.tlAddEvent"},
   ```

4. Verify or change the entry to be the following. The value for the `load` parameter must be set to `true`:

   ```
   {"domevent": "mousedown",
    "load": true,
    "tlhandler": "TeaLeaf.Client.tlAddEvent"},
   ```

5. Save the file.
6. Close and reopen Fiddler.

Managing IPv6 addresses

If your web application is tracking IPv6 addresses, you can configure Fiddler and the Client-Side Capture plug-in to convert them to IPv4 addresses, which are used internally by Tealeaf.

The following mappings are applied to the `LOCAL_ADDR` and `REMOTE_ADDR` fields in the request.

Source Mapped to

LOCAL_ADDR=::127.0.0.1
LOCAL_ADDR=127.0.0.1

LOCAL_ADDR=::FFFF:127.0.0.1
LOCAL_ADDR=127.0.0.1

Source Mapped to

LOCAL_ADDR=0:0:0:0:0:0:127.0.0.1
LOCAL_ADDR=127.0.0.1

LOCAL_ADDR=0:0:0:0:0:FFFF:127.0.0.1
LOCAL_ADDR=127.0.0.1

Source Mapped to

LOCAL_ADDR=0000:0000:0000:0000:0000:0000:127.0.0.1
LOCAL_ADDR=127.0.0.1

LOCAL_ADDR=0000:0000:0000:0000:0000:FFFF:127.0.0.1
LOCAL_ADDR=127.0.0.1

Source Mapped to

LOCAL_ADDR=0000:0000:0000:0000:0000:0000:7F01:0001
LOCAL_ADDR=127.0.0.1

LOCAL_ADDR=0000:0000:0000:0000:0000:FFFF:7F01:0001
LOCAL_ADDR=127.0.0.1

Note: IP addresses that are in native IPv4 format are not modified.

1. Open Fiddler2.
2. In the **Fiddler2** menu, select **Tools** > **Fiddler Options?**.
3. The options window is displayed. Click the **General** tab.
4. Select the **Enable IPv6 (if available)** option.
5. Click the **Connections** tab.
6. Select the **Allow remote computers to connect** option.
7. Click **OK**.
8. When IP addresses are detected in the above formats, they are written into IPv4 format.

Performing a Client-Side Capture

Fiddler is now ready to inject the client-side JavaScript and perform a session capture.

- You can use any browser that supports Fiddler. See "Configuring browsers to use Fiddler" on page 13.

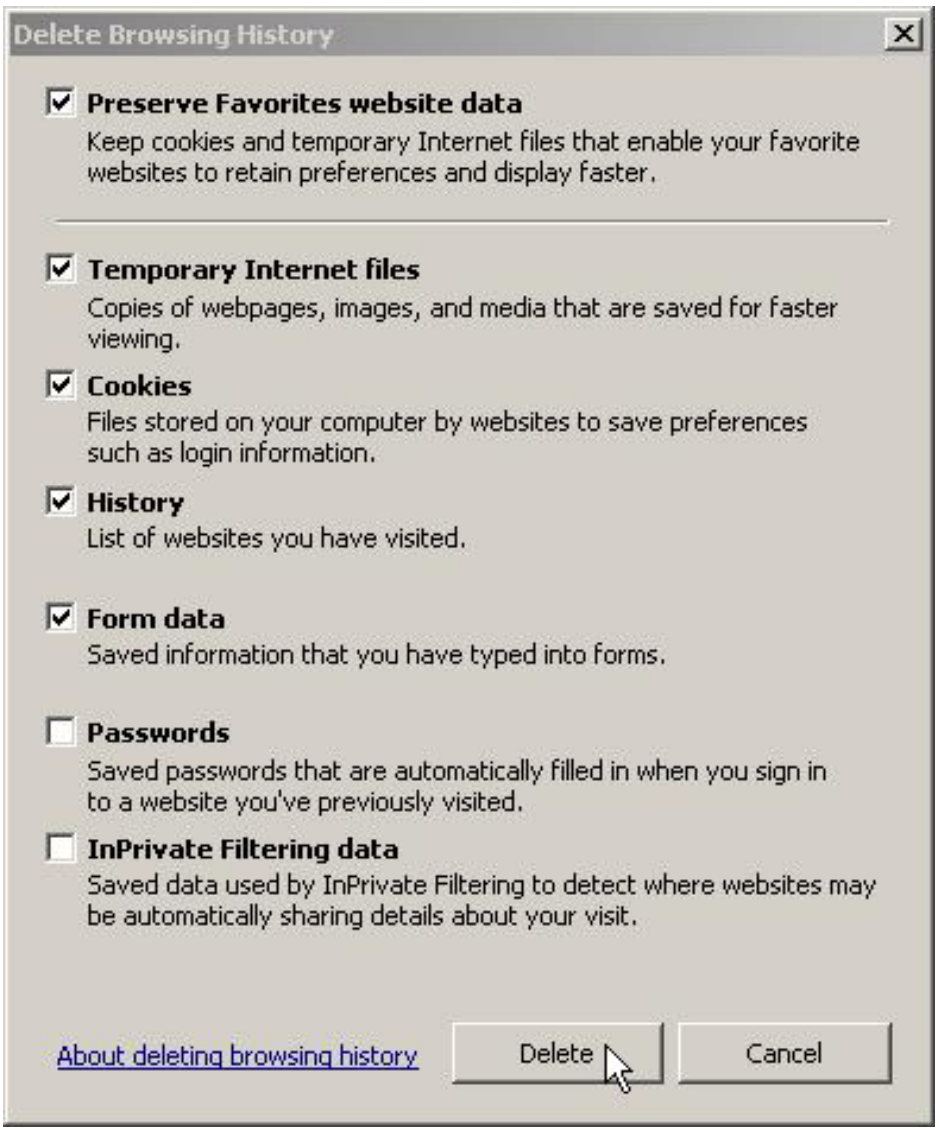
To perform a Client-side capture:

1. To begin capturing a session, you should first clear the browser cache.

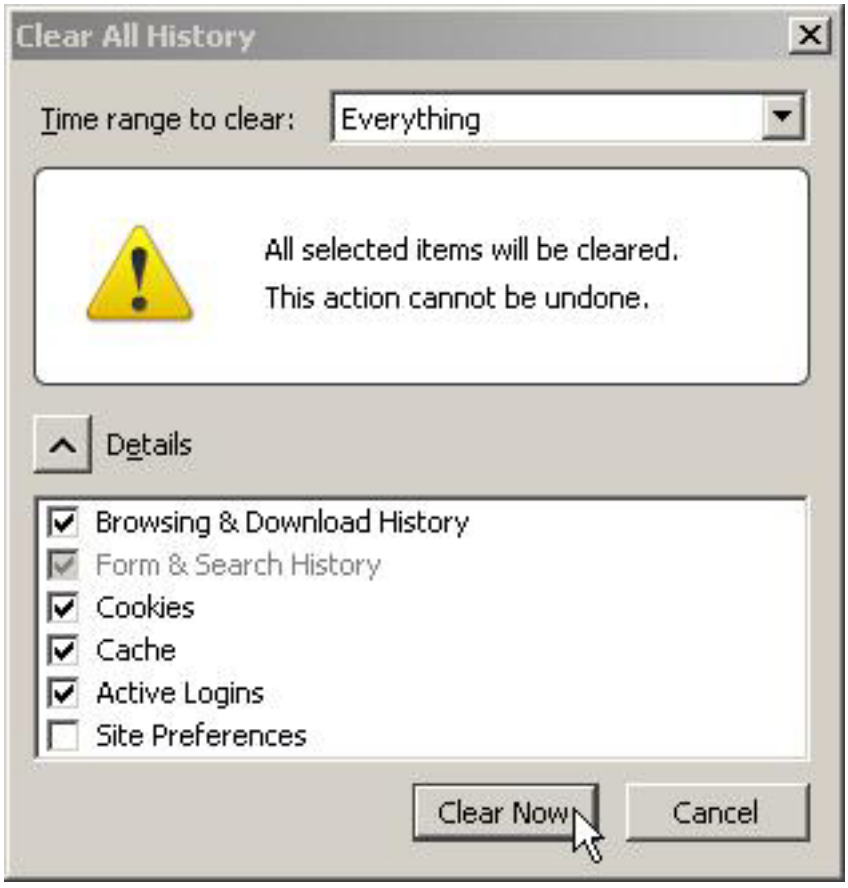
   Note: This option is needed only if you did not enabled clearing the browser cache for your browser through the **CSC Options** window. See "Configure Client-Side Capture" on page 5.

   Note: These options may vary depending on the browser and the version in use.

   - In the **IE** menu, select **Tools** > **Internet Options**. On the **General** tab, click **Delete...** under Browsing History. On the **Delete Browsing History** tab select the following options and click **Delete**.

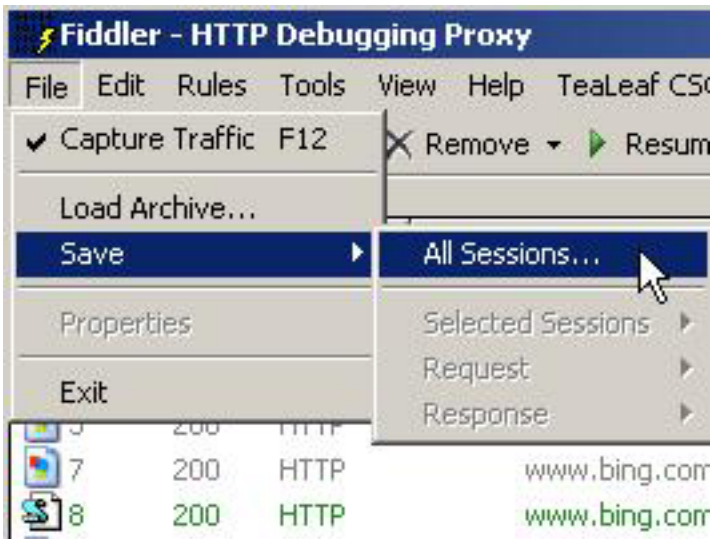

Delete Browsing History
Preserve Favorites website data
Keep cookies and temporary Internet files that enable your favorite websites to retain preferences and display faster.
Temporary Internet files
Copies of webpages, images, and media that are saved for faster viewing.
Cookies
Files stored on your computer by websites to save preferences such as login information.
History
List of websites you have visited.
Form data
Saved information that you have typed into forms.
Passwords
Saved passwords that are automatically filled in when you sign in to a website you've previously visited.
InPrivate Filtering data
Saved data used by InPrivate Filtering to detect where websites may be automatically sharing details about your visit.
About deleting browsing history
Delete
Cancel

- In the **Firefox** menu, select **Tools** > **Clear Recent History**. On the **Clear Recent History** tab, select the following options and click **Clear Now**.

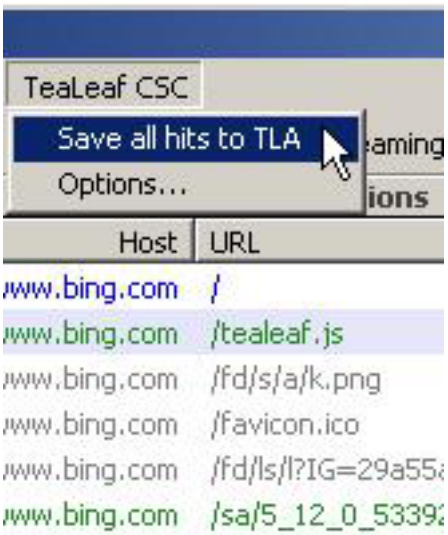


2. Next, clear any existing Fiddler sessions. In the **Fiddler** menu, select **Edit** > **Remove** > **All Sessions**.

3. From the **File** menu, verify that **Capture Traffic** was selected.
4. Browse through the web application that must be captured, visiting all wanted pages. Verify that Fiddler is able to see the pages you want to capture.
5. When you are finished browsing, close the browser and return to Fiddler.
6. In the **Fiddler** menu, select **File** > **Save** > **All Sessions**. Save the resulting `.saz` file in a location of your choice.

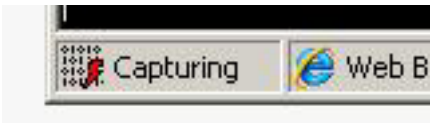


7. If you have access to RTV, under the **Tealeaf CSC** menu, select **Save all hits to TLA**. The session is saved and opened in RTV. You can verify if the pages and UI events was captured correctly.



Usage notes

- During RTV replay, you should disable Fiddler capture. If it is enabled, it captures the replay. To toggle capture, click the Fiddler status bar in the lower left:



- If the `TeaLeafCSC_Fiddler.js` was configured for inclusion, UI events are transmitted every 30 seconds or on unloading of the page. You might have to wait for 30 seconds after you finish your browsing before you save the `.tla` file using the `Save all hits to TLA` option in Fiddler.

- Fiddler and WebEx do not interact well together. Try to start WebEx before starting Fiddler. Verify that Fiddler is proxying browser traffic only; verify that the capture mode in the status bar is set to `Web Browsers`.
  - This issue may appear with other desktop sharing / remote meeting solutions.
  - See “Configure Fiddler” on page 2.

Cleansing captured sessions

If you are using Fiddler to capture sessions that contain references to domains other than the one being captured, the generated `TLA` may cause problems during replay.

For example, if the first hit of the session queries a different domain, a false user agent string may be submitted. On replay, the user agent string may be used to determine the type of renderer to use to render the hit. If the renderer is not available, Replay Server fails to render the hit.

To avoid these potential issues with your sessions, you can perform the following generalized steps.

Note: The following steps require understanding of privacy and Windows pipelines in Tealeaf. If you have questions, contact Tealeaf Customer Support .

1. In a development environment, create a privacy rule that drops hits from domains that are not the one for which you are capturing. Its configuration should look similar to the following:

   ```
   [Rule1]
   Enabled=True
   ReqField=HTTP_HOST
   ReqOp=CONTAINS
   ReqValue=example.com
   Not=True
   Action=DropHit
   ```

   - See "Privacy Session Agent" in the *IBM Tealeaf CX Configuration Manual*.
2. Use request data that contains such a reference as the test data for the Privacy Tester Utility, where you can test if your rule works. See "Privacy Tester Utility" in the *IBM Tealeaf CX Configuration Manual*.
3. You might want to create a simple child pipeline consisting of the Privacy and Archive session agents through which you feed your session in the development environment.
4. Use the Tealeaf Archive Reader utility to submit the `TLA` session into the appropriate pipeline. See "TeaLeaf Archive Reader - Run Archived Sessions" in the *IBM Tealeaf CX Configuration Manual*.
5. The session is fed through the pipeline, with a resulting `TLA` generated in the output directory that is specified by the configuration for the Archive session agent.
   - See "Archive Session Agent" in the *IBM Tealeaf CX Configuration Manual*.

The resulting `TLA` was purged of references to non-primary domains.

Configuring browsers to use Fiddler

Auto-configure for most browsers

Internet Explorer, Google Chrome, Apple Safari, and Opera should automatically use Fiddler when Fiddler is configured to capture traffic.

Note: For Opera, you must start Fiddler before starting the browser.

Each browser lets you connect a proxy server. Usually, this setting is in the **Options (or Preferences)** menu.

- You can either point directly at Fiddler:
  `http://127.0.0.1:8888`
- You can use proxy auto-configuration, which allows Fiddler to rewrite the configuration script when it is attached and detached. As a result, you should not need to manually enable or disable the proxy in your client based on Fiddler usage. After configuring proxy auto-configure, restart the browser, and the new setting is detected.

Configuring Firefox to use Fiddler

Note: These steps may vary depending on your version of the browser.

1. To configure Firefox to point at Fiddler, you must acquire the correct auto-configuration URL from Fiddler. Select **Tools** > **Fiddler Options** > **Connections**.
2. Click the **Copy Browser Proxy Configuration URL** link.
3. Select the following in the **Firefox** menu: **Tools** > **Options** > **Advanced**.
4. Click the **Network** tab.
5. Click **Settings...**.
6. Select **Automatic proxy configuration URL**.
7. Paste the link in the text box.
8. Click **OK** twice.

Using Fiddler with secure sites

When using Fiddler with a secure site, the browser displays a certificate warning. For more information about how to configure Fiddler to manage HTTPS connections, see `http://www.fiddler2.com/Fiddler/help/httpsdecryption.asp`.

References

For more documentation on Fiddler, see `http://www.fiddler2.com/Fiddler/help`.

Chapter 2. Using Client-Side Capture for Fiddler with mobile devices

This section describes how to configure Fiddler for use with capturing sessions from mobile devices using Client-Side Capture.

- For more information about Client-Side Capture and Fiddler, see Chapter 1, "Using Client-Side Capture for Fiddler," on page 1.

Install Client-Side Capture for Fiddler

Fiddler download

Fiddler is an HTTP proxy debugger. A free tool is available at: `http://www.fiddler2.com/fiddler2/`.

Install CSC plug-in for Fiddler

See Chapter 1, "Using Client-Side Capture for Fiddler," on page 1.

Enabling remote connections

Since Fiddler cannot be deployed on a Mac or iOS device, Fiddler must be configured to use a remote connection.

1. In the **Fiddler** menu, select **Tools** > **Fiddler Options** > **Connections Tab**.
2. On this tab, select the `Allow remote computers to connect` check box.

   Note: Write down the port number on which Fiddler is listening for HTTP traffic. By default, the port is 8888. This port number and the system's name/IP address are required to configure the proxy settings on the Mac system and the device.
3. Restart Fiddler for all the settings to take effect.
4. Verify that the proxy is working:
   a. Start Internet Explorer.
   b. Clear the browser cache.
   c. Browse to any website.
   d. The HTTP traffic should be captured by Fiddler.

Configuring the mobile device to use Fiddler proxy

1. For your Mac system, you can configure the system level HTTP(S) proxy to point to your Windows system on which Fiddler is running. Specify the computer name or IP address) and the port number.
   - For more information, see `http://docs.info.apple.com/article.html?path=Mac/10.5/en/8760.html`.
2. Verify that the proxy is configured correctly by using Safari to browse the web.
3. For your mobile device, configure the HTTP proxy settings. Select **Settings** > **WiFi** > **<WiFi Network IDHTTP Proxy** > **Manual**.
4. Verify that your mobile application traffic can be captured by Fiddler by running your application on the sim or device.

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Configuring the Tealeaf Target Page

1. Identify a server that is accessible to your application.
2. Select one of the sample Tealeaf target files, as appropriate. Sample targets are available for aspx, jsp, and php application servers.
3. Deploy the target page on the server. Note its URL.
4. Test the deployment by accessing the URL through your browser.

Scripting Fiddler to route existing customer application target to `TeaLeafTarget.php`

1. In the **Fiddler** menu, select **Rules** > **Customize Rules...**
2. It opens **CustomRules.js** file. Under **function OnBeforeRequest(oSession: Session)** add the following code and save the file.

```
if (oSession.url=="www.customersite.com/Target.html") {
   oSession.url = "www.straussandplesser.com/store/js/tealeaf/
   TeaLeafTarget.php";
        }
```

Configuring the Tealeaf Logging Framework

See "Tealeaf iOS Logging Framework Reference Guide" in the *IBM Tealeaf iOS Logging Framework Reference Guide*.
See "Tealeaf Android Logging Framework Reference Guide" in the *IBM Tealeaf Android Logging Framework Reference Guide*.

Chapter 3. IBM Tealeaf documentation and help

IBM Tealeaf provides documentation and help for users, developers, and administrators.

Viewing product documentation

All IBM Tealeaf product documentation is available at the following website:

https://tealeaf.support.ibmcloud.com/

Use the information in the following table to view the product documentation for IBM Tealeaf:

Table 1. Getting help

To view...	**Do this...**
Product documentation	On the IBM Tealeaf portal, go to **?** > **Product Documentation**.
Help for a page on the IBM Tealeaf Portal	On the IBM Tealeaf portal, go to **?** > **Help for This Page**.

Available documents for IBM Tealeaf products

Use the following table to view a list of available documents for all IBM Tealeaf products:

Table 2. Available documentation for IBM Tealeaf products

IBM Tealeaf products	**Available documents**
IBM Tealeaf CX	• *IBM Tealeaf Customer Experience Overview Guide* • *IBM Tealeaf CX Client Framework Data Integration Guide* • *IBM Tealeaf CX Configuration Manual* • *IBM Tealeaf CX Cookie Injector Manual* • *IBM Tealeaf CX Databases Guide* • *IBM Tealeaf CX Event Manager Manual* • *IBM Tealeaf CX Glossary* • *IBM Tealeaf CX Installation Manual* • *IBM Tealeaf CX PCA Manual* • *IBM Tealeaf CX PCA Release Notes*

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Table 2. Available documentation for IBM Tealeaf products (continued)

IBM Tealeaf products	Available documents
IBM Tealeaf CX	• *IBM Tealeaf CX RealiTea Viewer Client Side Capture Manual* • *IBM Tealeaf CX RealiTea Viewer User Manual* • *IBM Tealeaf CX Release Notes* • *IBM Tealeaf CX Release Upgrade Manual* • *IBM Tealeaf CX Support Troubleshooting FAQ* • *IBM Tealeaf CX Troubleshooting Guide* • *IBM Tealeaf CX UI Capture j2 Guide* • *IBM Tealeaf CX UI Capture j2 Release Notes*
IBM Tealeaf cxImpact	• *IBM Tealeaf cxImpact Administration Manual* • *IBM Tealeaf cxImpact User Manual* • *IBM Tealeaf cxImpact Reporting Guide*
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